



# GULF STATES POLICY INSTITUTE

A study by RAND Infrastructure, Safety, and Environment

CHILDREN AND FAMILIES  
EDUCATION AND THE ARTS  
ENERGY AND ENVIRONMENT  
HEALTH AND HEALTH CARE  
INFRASTRUCTURE AND  
TRANSPORTATION  
INTERNATIONAL AFFAIRS  
LAW AND BUSINESS  
NATIONAL SECURITY  
POPULATION AND AGING  
PUBLIC SAFETY  
SCIENCE AND TECHNOLOGY  
TERRORISM AND  
HOMELAND SECURITY

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis.

This electronic document was made available from [www.rand.org](http://www.rand.org) as a public service of the RAND Corporation.

Skip all front matter: [Jump to Page 1](#) ▼

## Support RAND

[Browse Reports & Bookstore](#)

[Make a charitable contribution](#)

## For More Information

Visit RAND at [www.rand.org](http://www.rand.org)

Explore the [RAND Gulf States Policy Institute](#)

View [document details](#)

## Limited Electronic Distribution Rights

This document and trademark(s) contained herein are protected by law as indicated in a notice appearing later in this work. This electronic representation of RAND intellectual property is provided for non-commercial use only. Unauthorized posting of RAND electronic documents to a non-RAND website is prohibited. RAND electronic documents are protected under copyright law. Permission is required from RAND to reproduce, or reuse in another form, any of our research documents for commercial use. For information on reprint and linking permissions, please see [RAND Permissions](#).

This product is part of the RAND Corporation technical report series. Reports may include research findings on a specific topic that is limited in scope; present discussions of the methodology employed in research; provide literature reviews, survey instruments, modeling exercises, guidelines for practitioners and research professionals, and supporting documentation; or deliver preliminary findings. All RAND reports undergo rigorous peer review to ensure that they meet high standards for research quality and objectivity.

TECHNICAL REPORT

# Coastal Louisiana Risk Assessment Model

---

## Appendix: Flood Depth Results From the Final 2012 Master Plan Analysis

*Jordan R. Fischbach • David R. Johnson • David S. Ortiz  
Benjamin P. Bryant • Matthew Hoover • Jordan Ostwald*

Sponsored by the Coastal Protection and Restoration Authority of Louisiana



GULF STATES POLICY INSTITUTE

A study by RAND Infrastructure, Safety, and Environment

This research was sponsored by the Coastal Protection and Restoration Authority of the State of Louisiana and was conducted in the RAND Gulf States Policy Institute and the Environment, Energy, and Economic Development Program within RAND Infrastructure, Safety, and Environment.

**Library of Congress Control Number:**

ISBN: 978-0-8330-7708-0

The RAND Corporation is a nonprofit institution that helps improve policy and decisionmaking through research and analysis. RAND's publications do not necessarily reflect the opinions of its research clients and sponsors.

**RAND®** is a registered trademark.

© Copyright 2012 RAND Corporation

Permission is given to duplicate this document for personal use only, as long as it is unaltered and complete. Copies may not be duplicated for commercial purposes. Unauthorized posting of RAND documents to a non-RAND website is prohibited. RAND documents are protected under copyright law. For information on reprint and linking permissions, please visit the RAND permissions page (<http://www.rand.org/publications/permissions.html>).

Published 2012 by the RAND Corporation  
1776 Main Street, P.O. Box 2138, Santa Monica, CA 90407-2138  
1200 South Hayes Street, Arlington, VA 22202-5050  
4570 Fifth Avenue, Suite 600, Pittsburgh, PA 15213-2665  
RAND URL: <http://www.rand.org>  
To order RAND documents or to obtain additional information, contact  
Distribution Services: Telephone: (310) 451-7002;  
Fax: (310) 451-6915; Email: [order@rand.org](mailto:order@rand.org)



## Appendix

# Flood Depth Results From the Final 2012 Master Plan Analysis

### Table of Figures

Figure A.1: Estimated Flood Depths Under Current Conditions in 2012, in Feet, by Census Block for Coastal Louisiana at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	5
Figure A.2: Estimated Flood Depth in 2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	6
Figure A.3: Estimated Change in Flood Depth from 2012-2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	7
Figure A.4: Estimated Flood Depth in 2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	8
Figure A.5: Estimated Change in Flood Depth from 2012-2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	9
Figure A.6: Estimated Flood Depth in 2036, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	10
Figure A.7: Estimated Change in Flood Depth from 2012-2036, in Feet, by Census Block for Coastal Louisiana in 2036 in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	11
Figure A.8: Estimated Flood Depth in 2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	12
Figure A.9: Estimated Change in Flood Depth from 2012-2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	13
Figure A.10: Estimated Flood Depth in 2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	14

Figure A.11: Estimated Change in Flood Depth from 2012-2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	15
Figure A.12: Estimated Flood Depth in 2061, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	16
Figure A.13: Estimated Change in Flood Depth from 2012-2061, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	17
Figure A.14: Estimated Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	18
Figure A.15: Estimated Change in Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	19
Figure A.16: Estimated Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	20
Figure A.17: Estimated Change in Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	21
Figure A.18: Estimated Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	22
Figure A.19: Estimated Change in Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances. ....	23
Figure A.20: Estimated Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	24
Figure A.21: Estimated Change in Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	25
Figure A.22: Estimated Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	26
Figure A.23: Estimated Change in Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with	

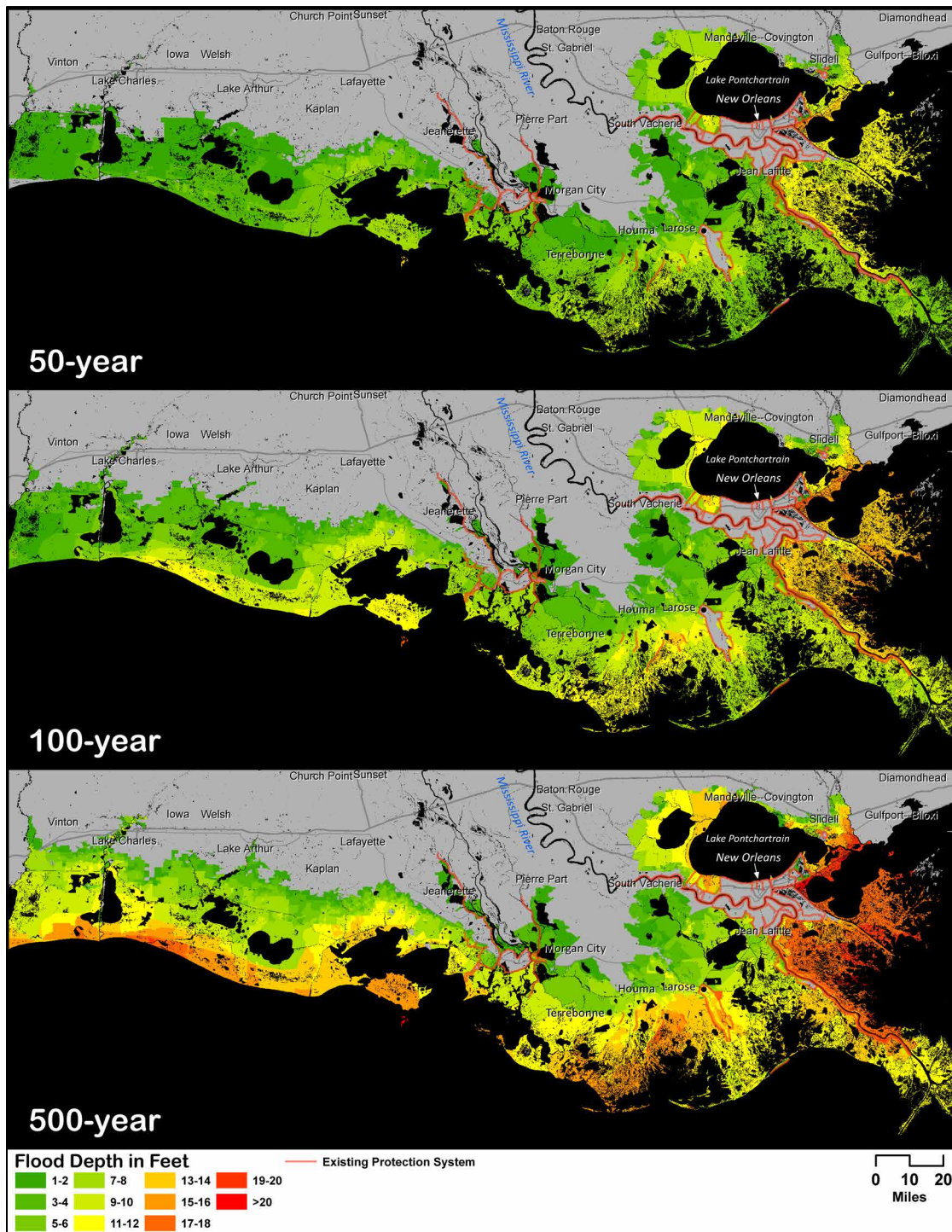
High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	27
--	----

Figure A.24: Estimated Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	28
---	----

Figure A.25: Estimated Change in Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances.....	29
---	----

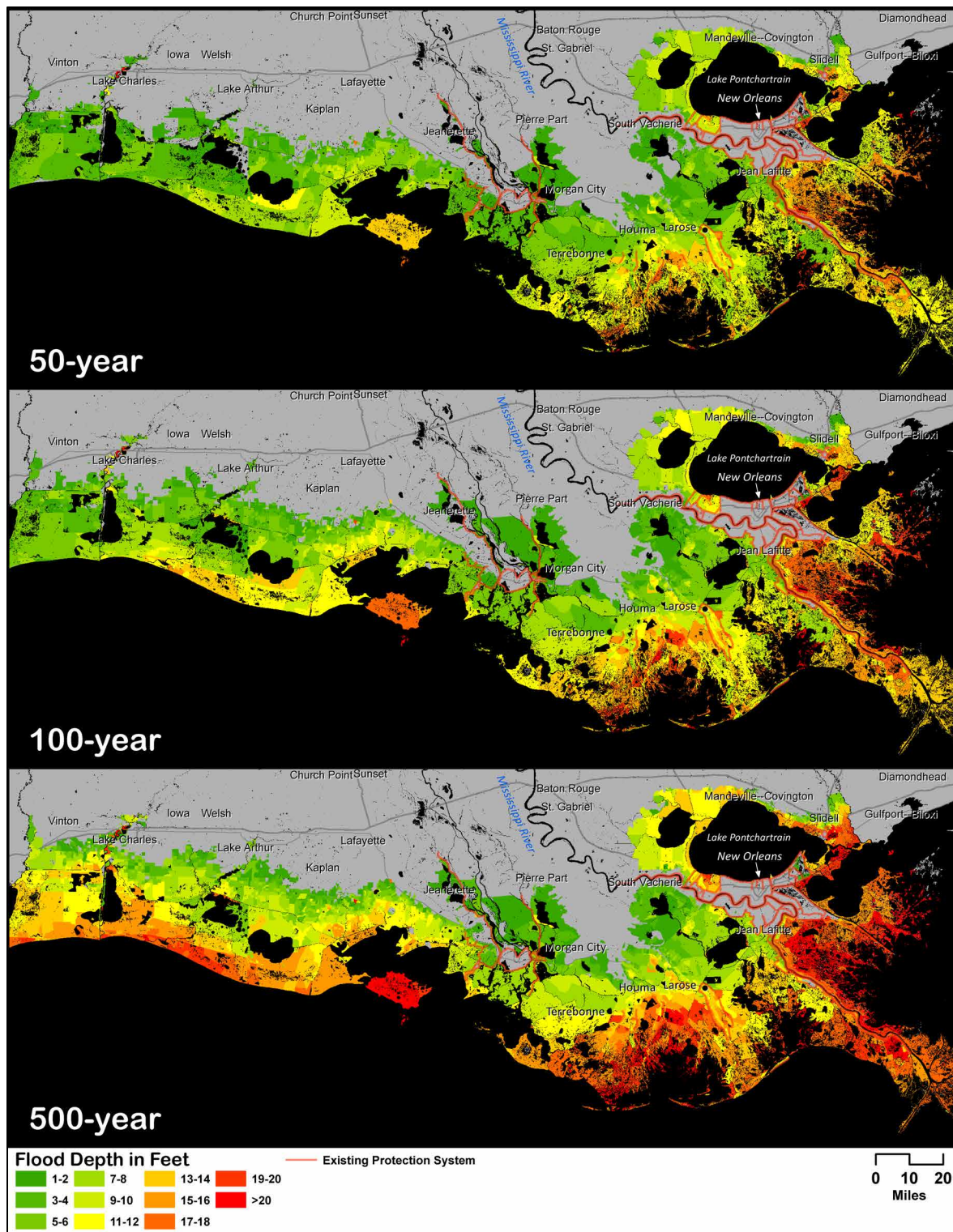


## Future Without Action Flood Depth Results



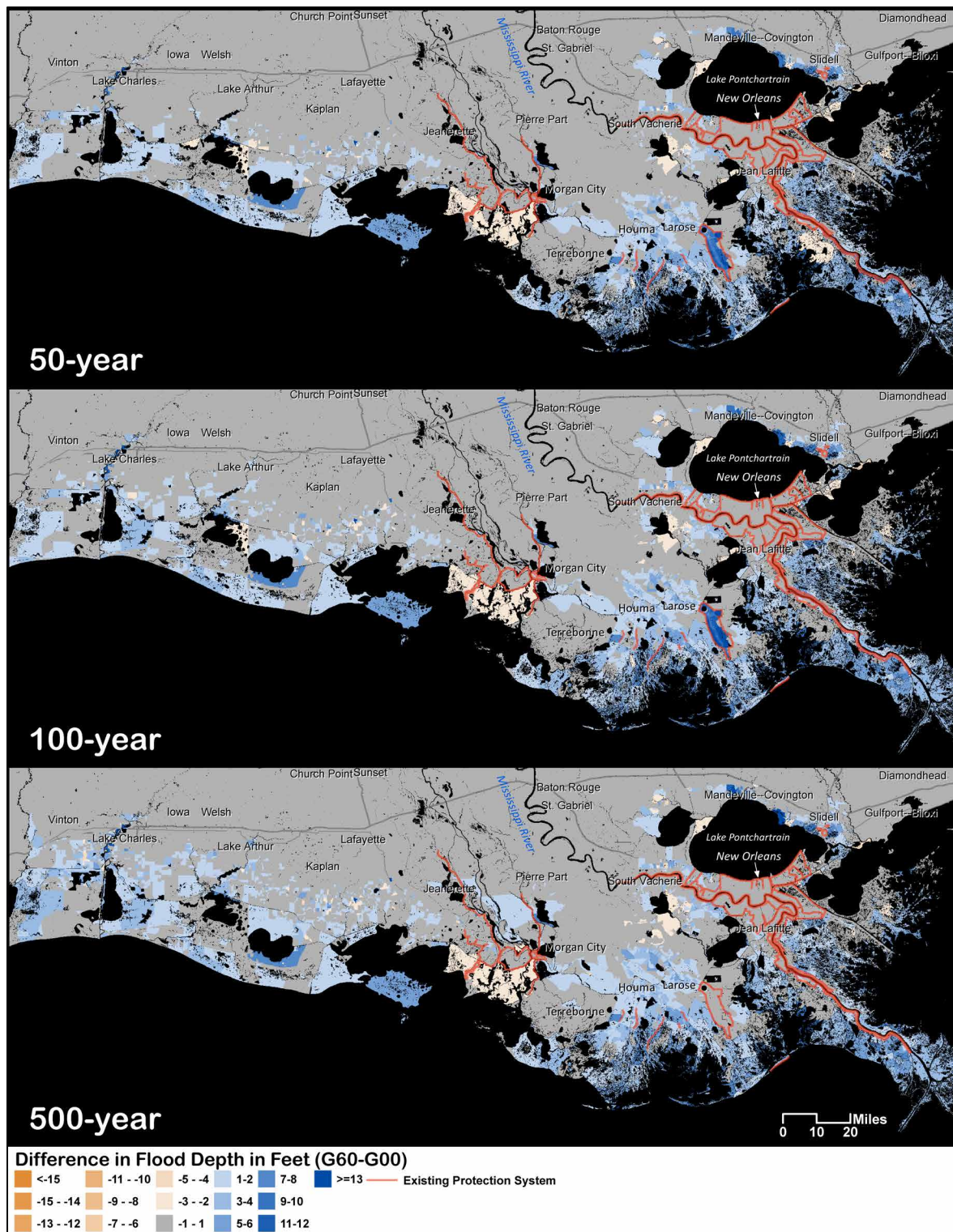
**Figure A.1: Estimated Flood Depths Under Current Conditions in 2012, in Feet, by Census Block for Coastal Louisiana at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





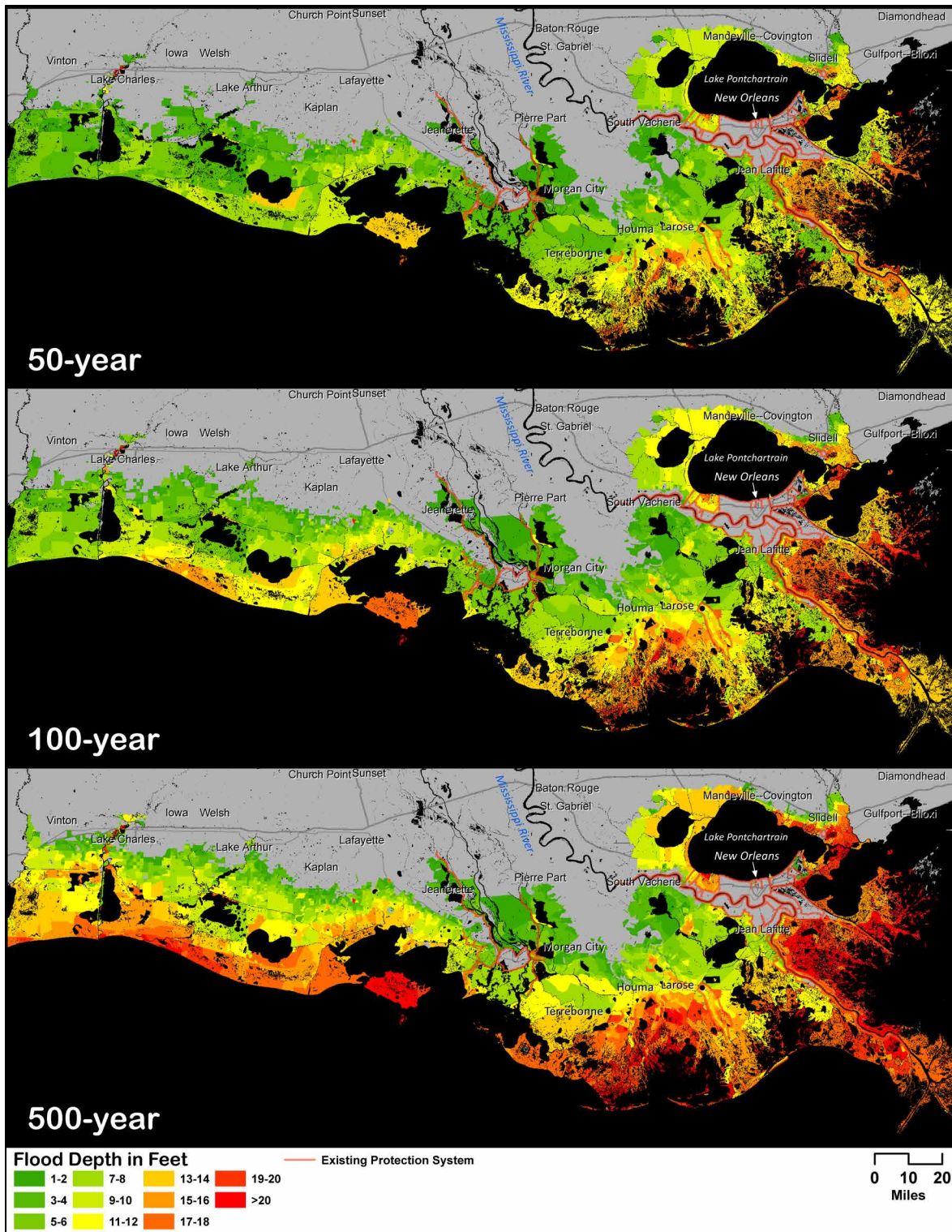
**Figure A.2: Estimated Flood Depth in 2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





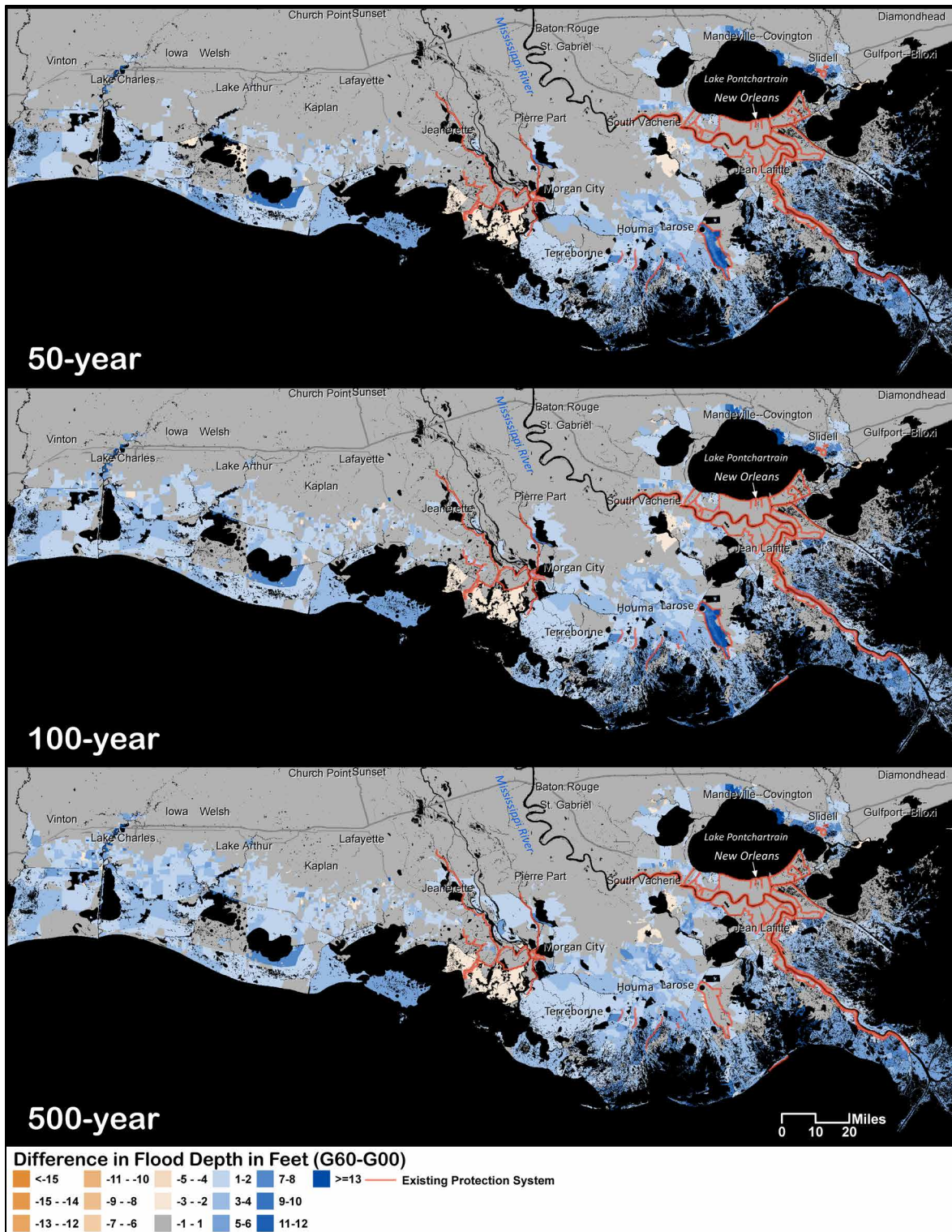
**Figure A.3: Estimated Change in Flood Depth from 2012-2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





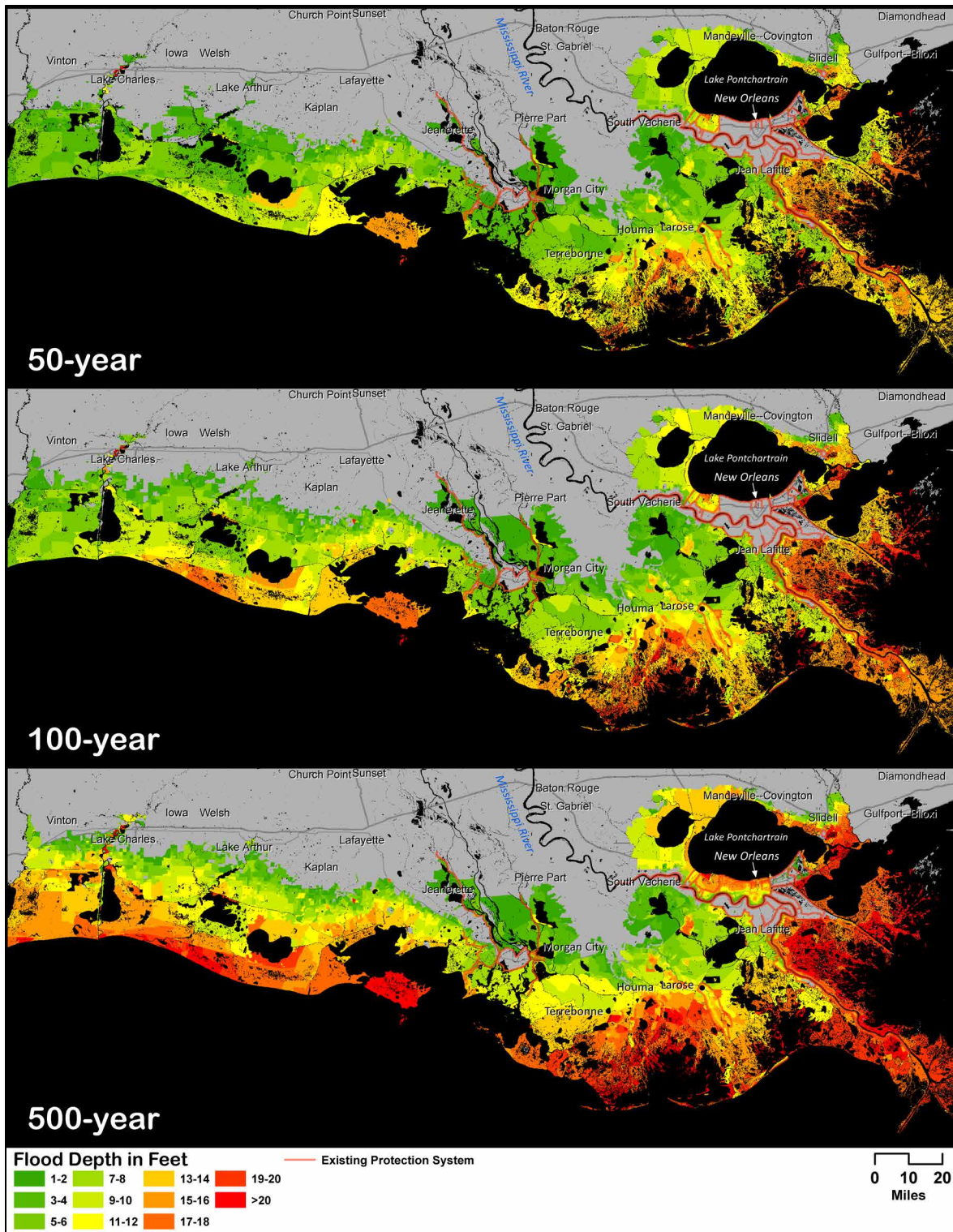
**Figure A.4: Estimated Flood Depth in 2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





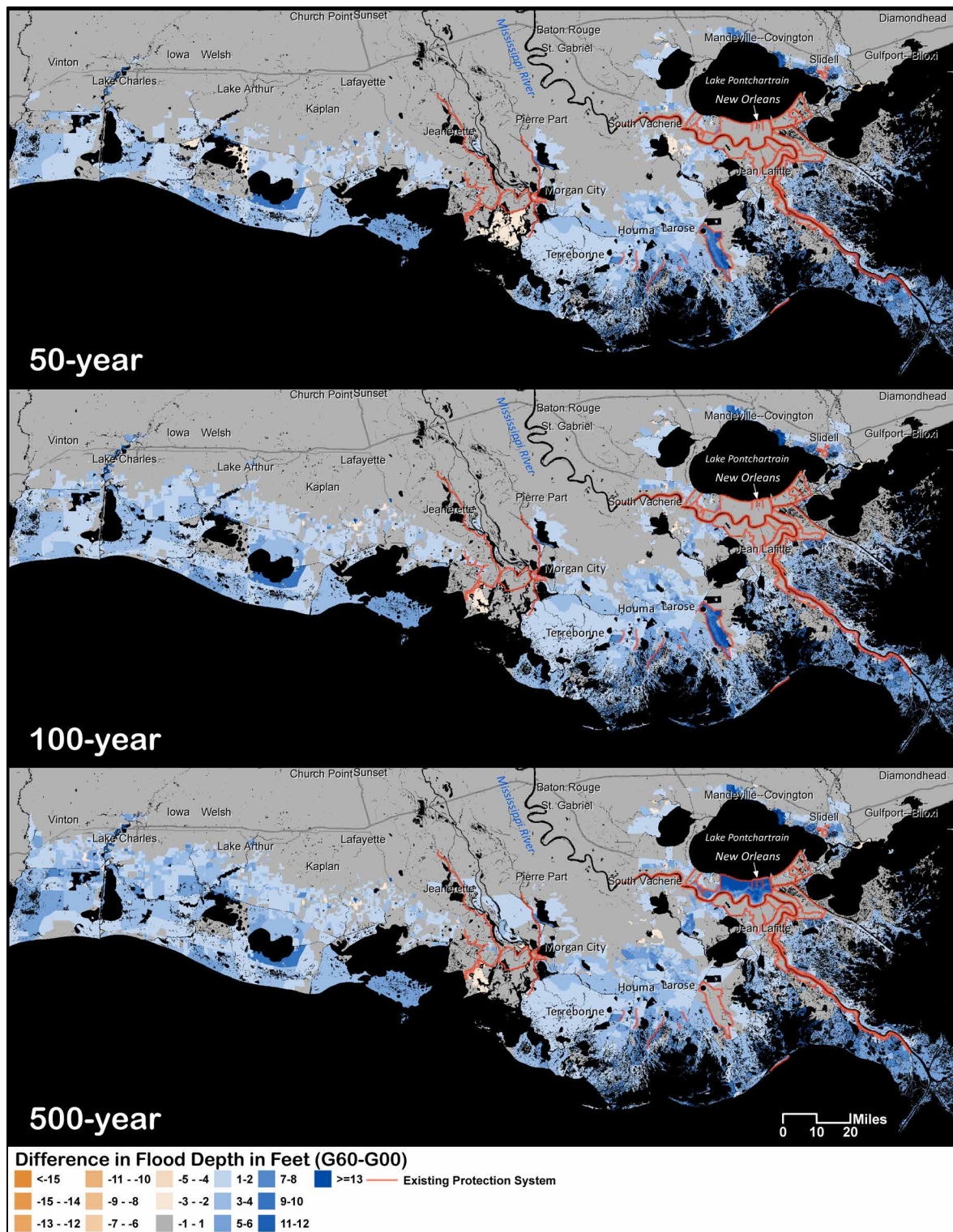
**Figure A.5: Estimated Change in Flood Depth from 2012-2036, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





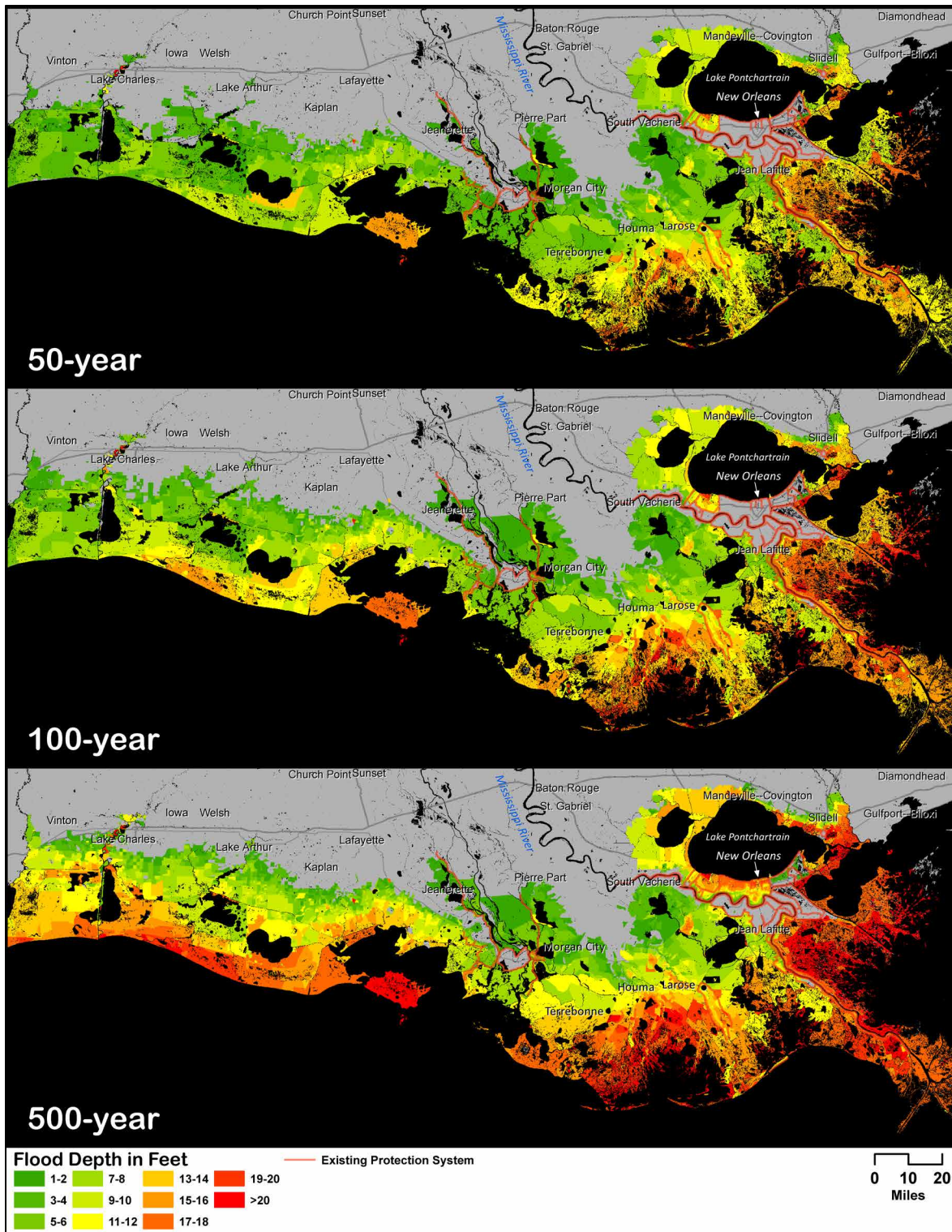
**Figure A.6: Estimated Flood Depth in 2036, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





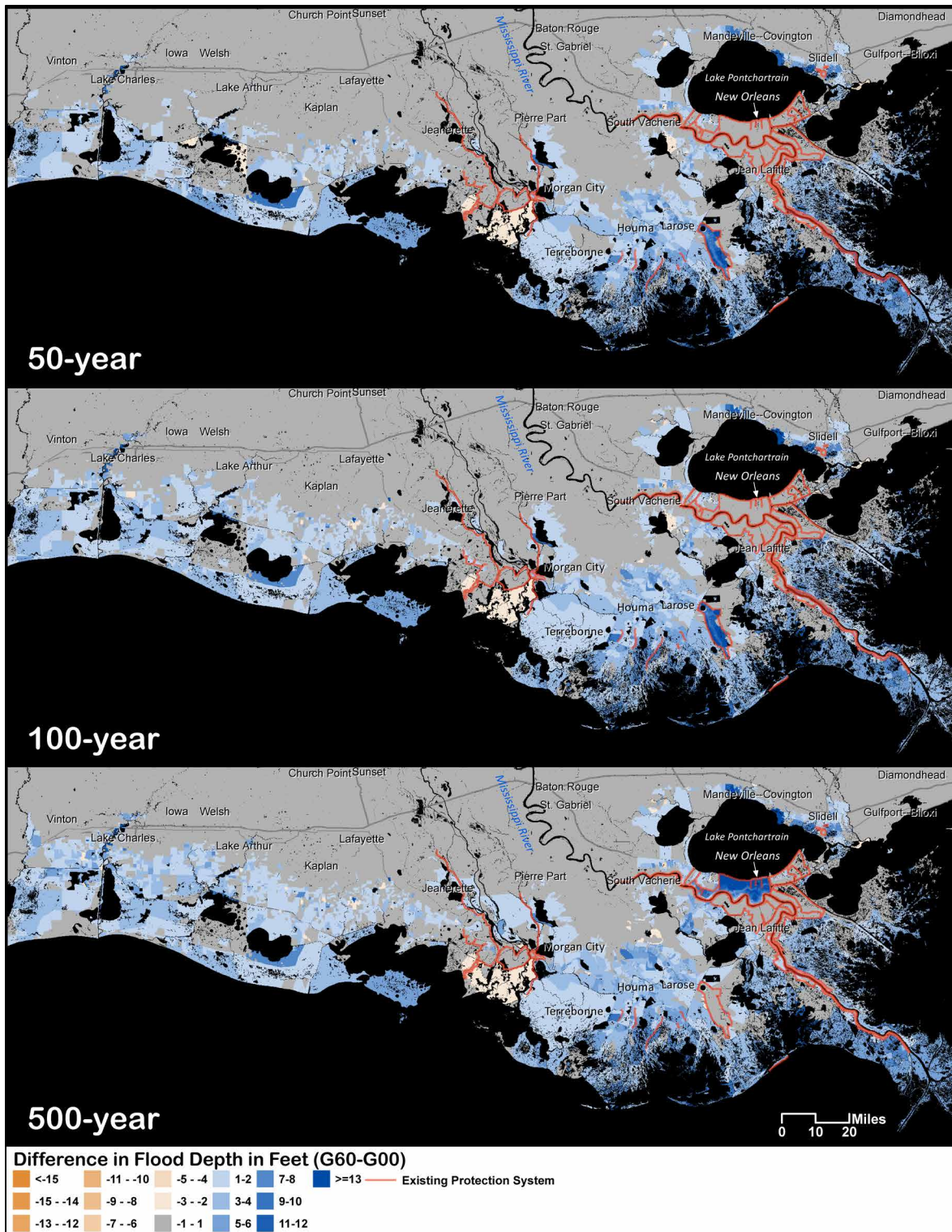
**Figure A.7: Estimated Change in Flood Depth from 2012-2036, in Feet, by Census Block for Coastal Louisiana in 2036 in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





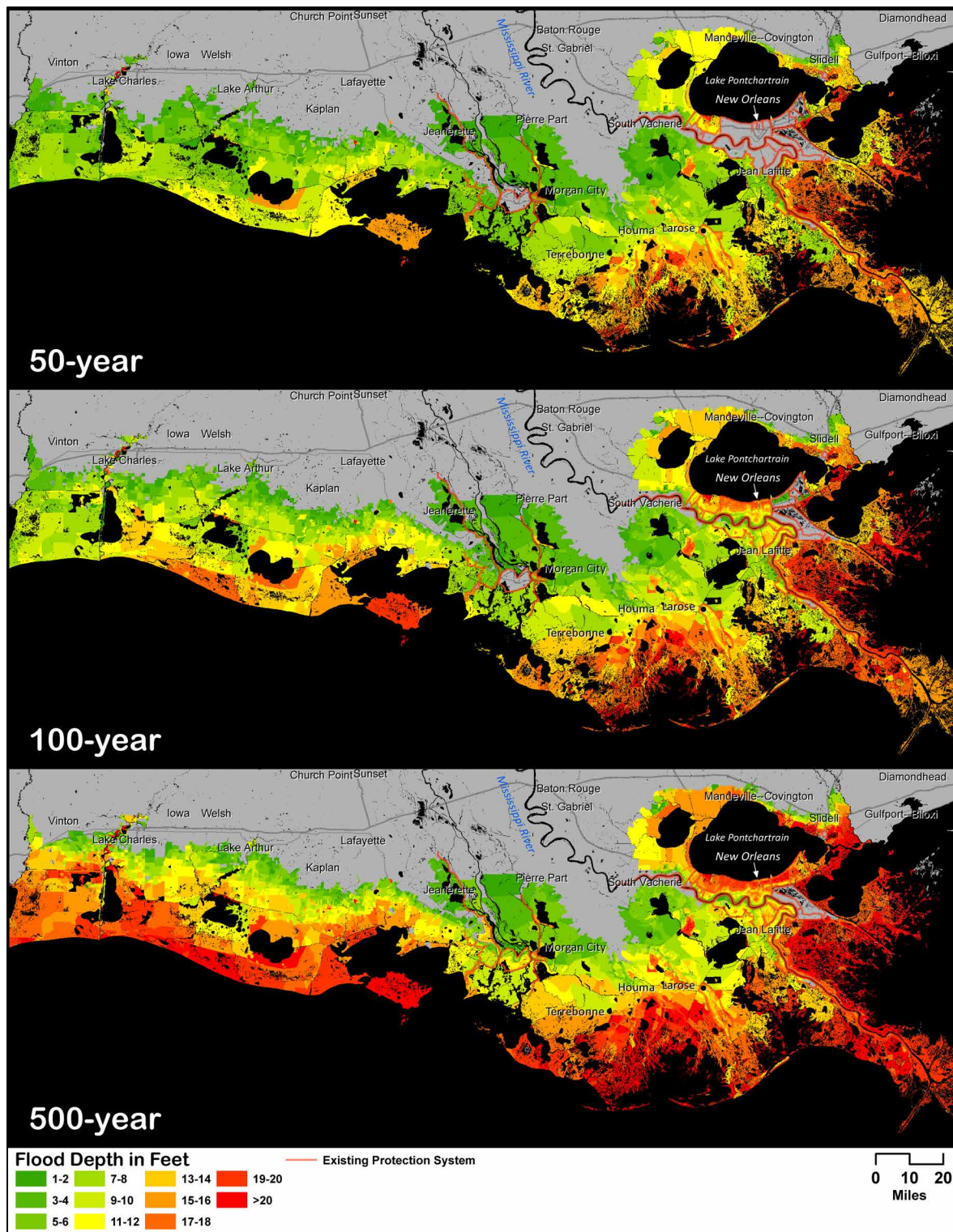
**Figure A.8: Estimated Flood Depth in 2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





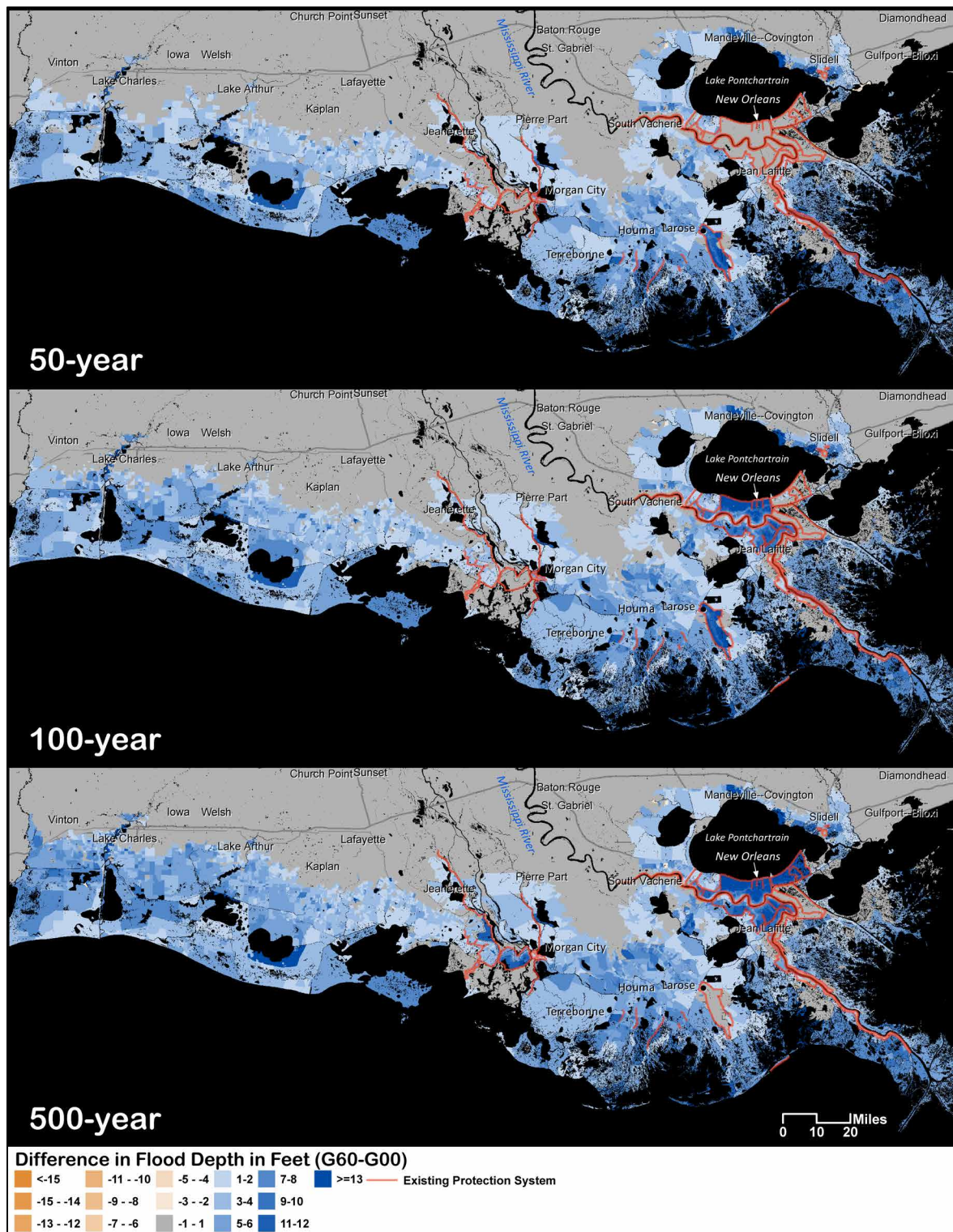
**Figure A.9: Estimated Change in Flood Depth from 2012-2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





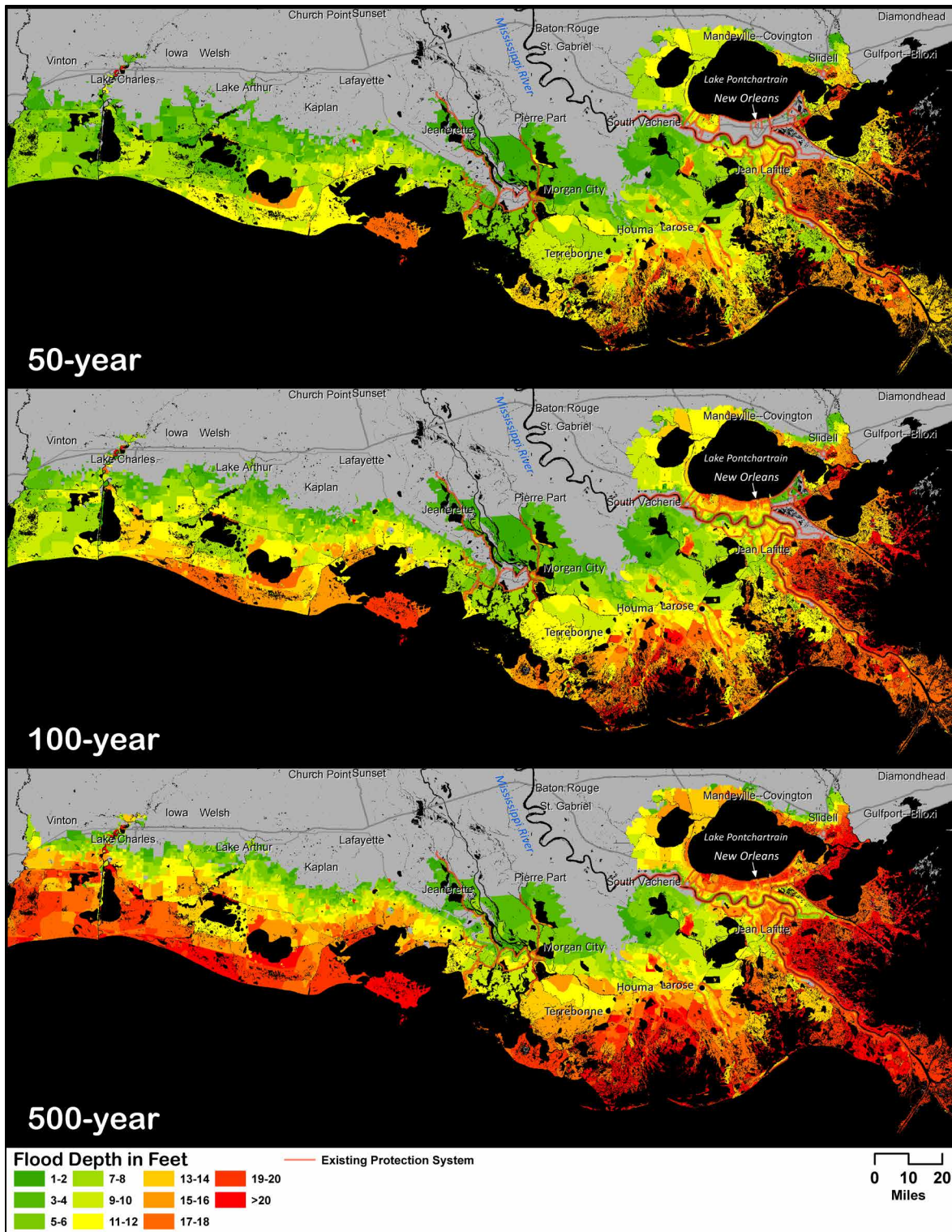
**Figure A.10: Estimated Flood Depth in 2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





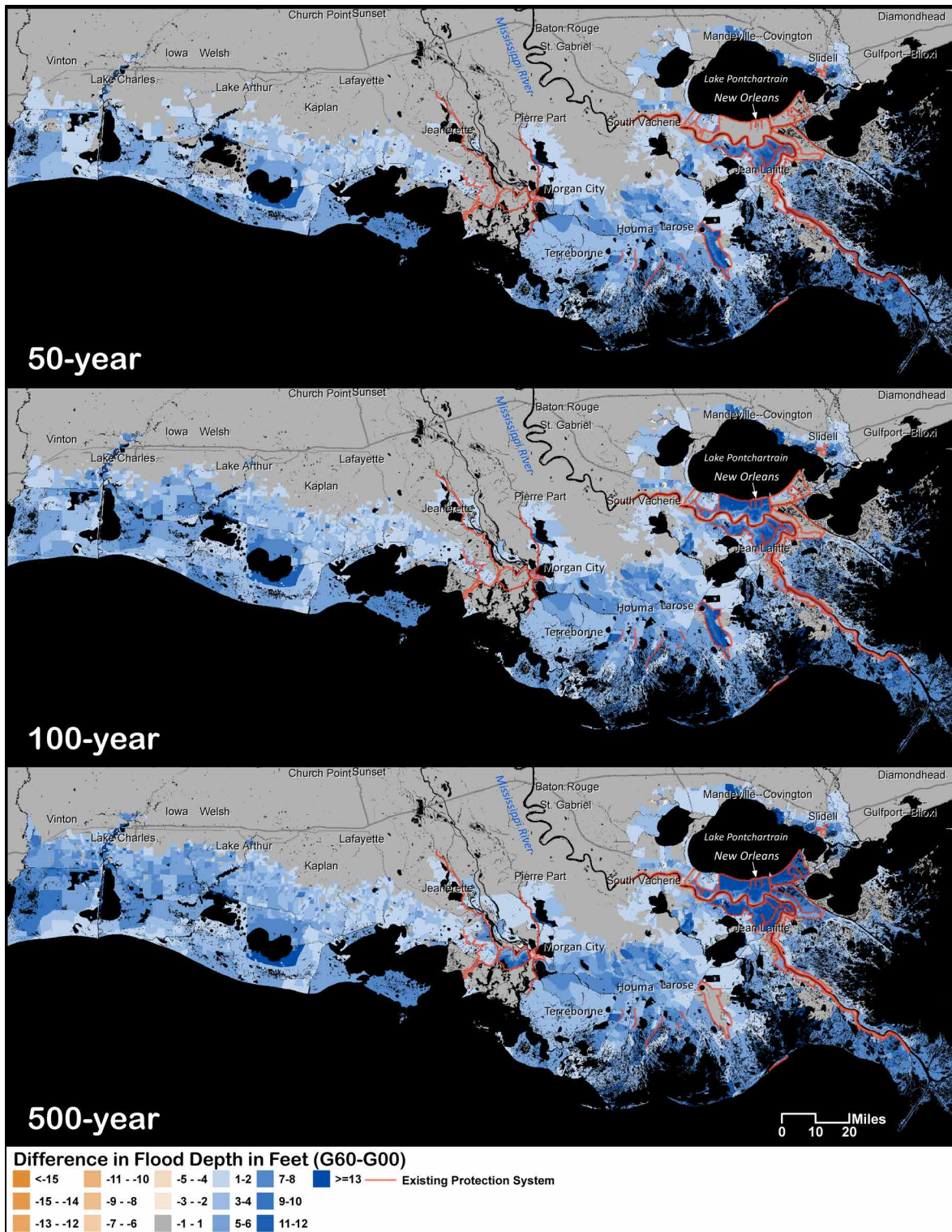
**Figure A.11: Estimated Change in Flood Depth from 2012-2061, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level Rise at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





**Figure A.12: Estimated Flood Depth in 2061, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





**Figure A.13: Estimated Change in Flood Depth from 2012-2061, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**

## Flood Depth Results with Master Plan

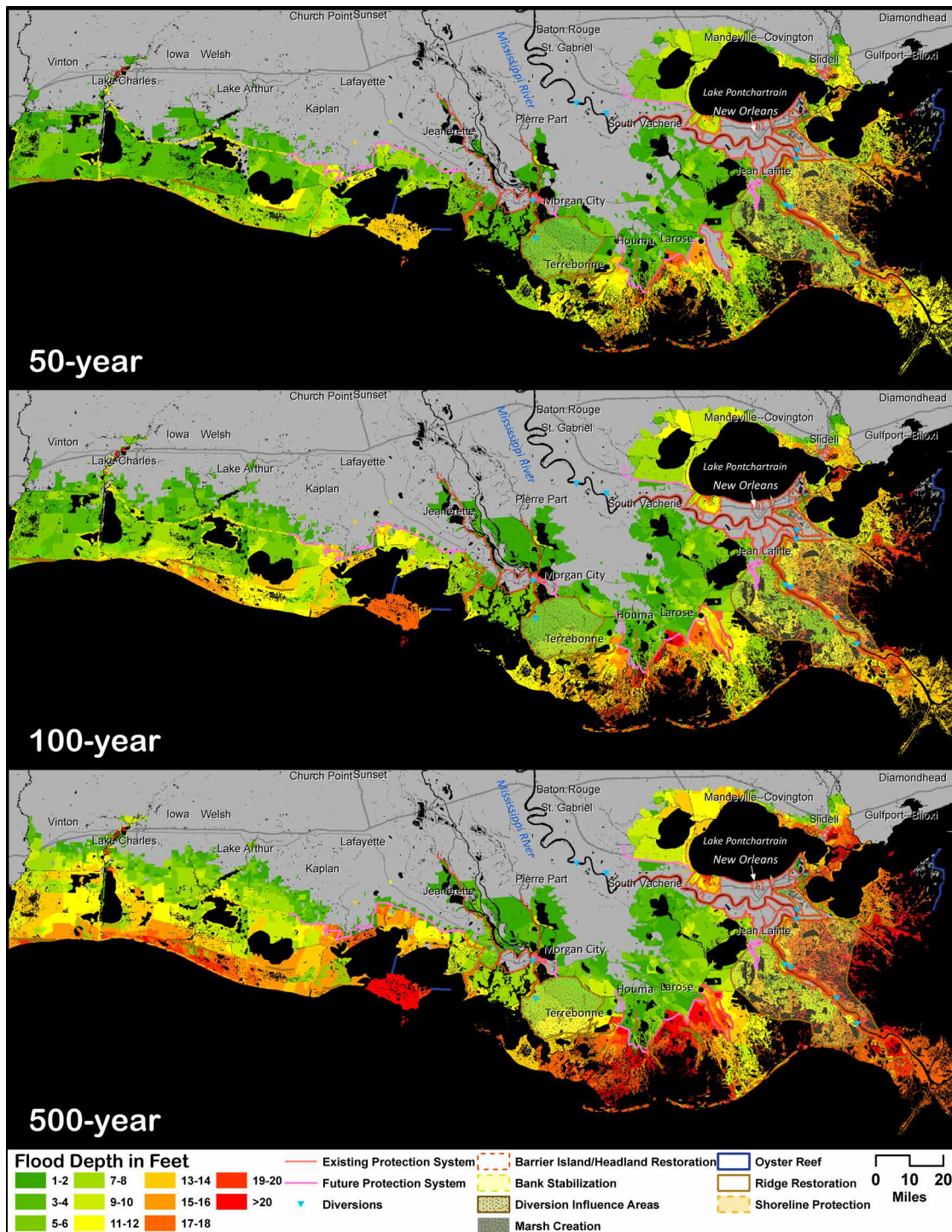
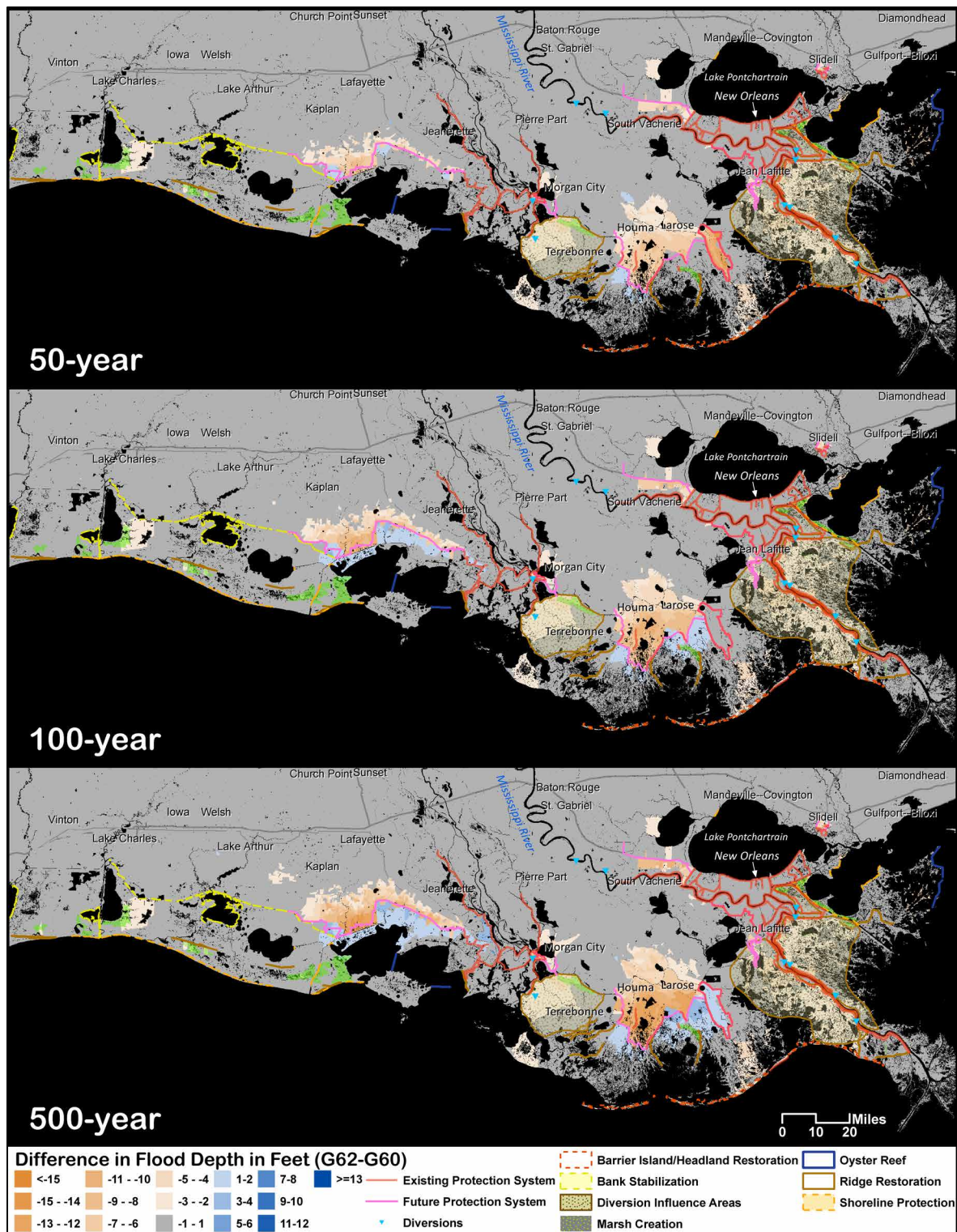
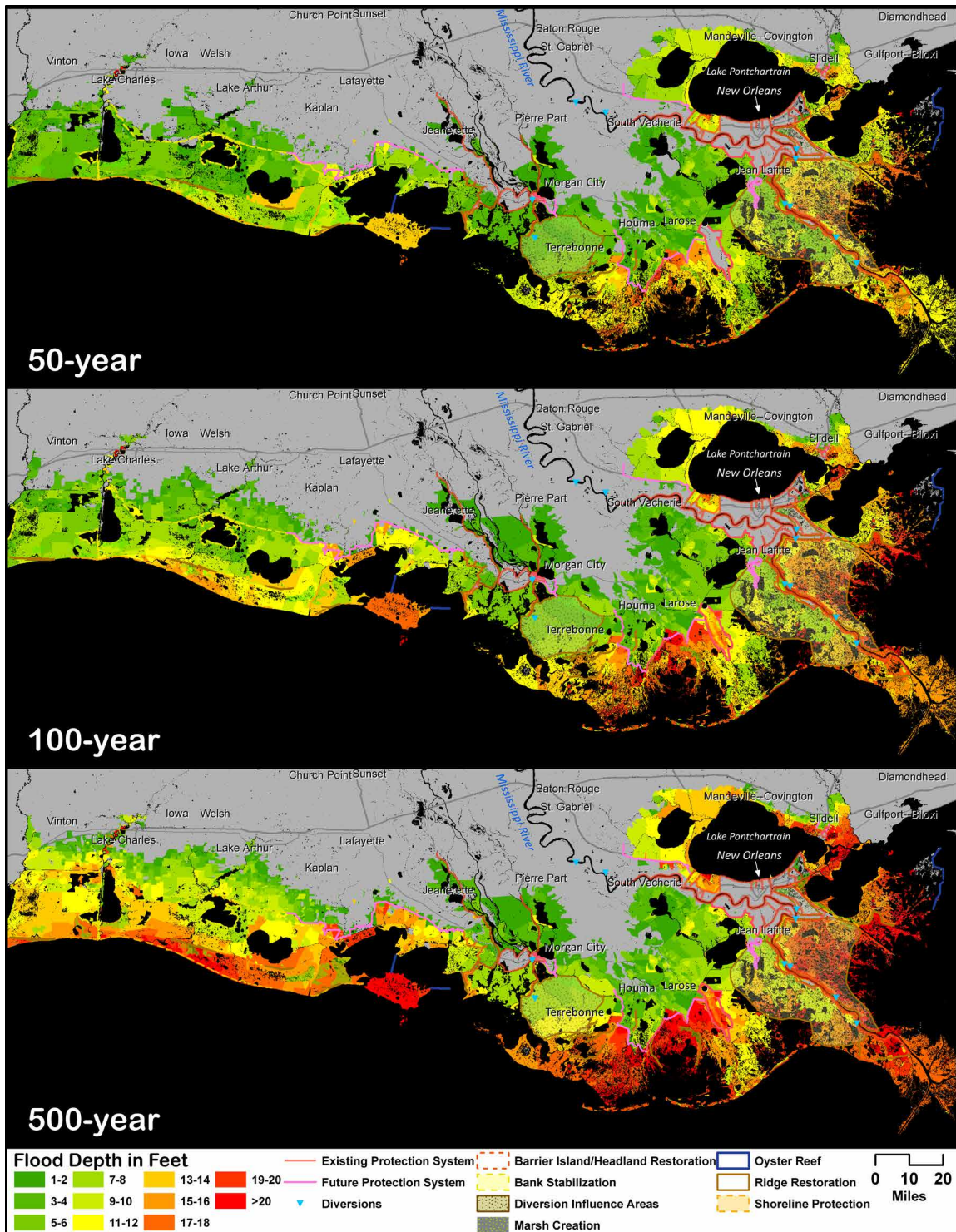


Figure A.14: Estimated Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances



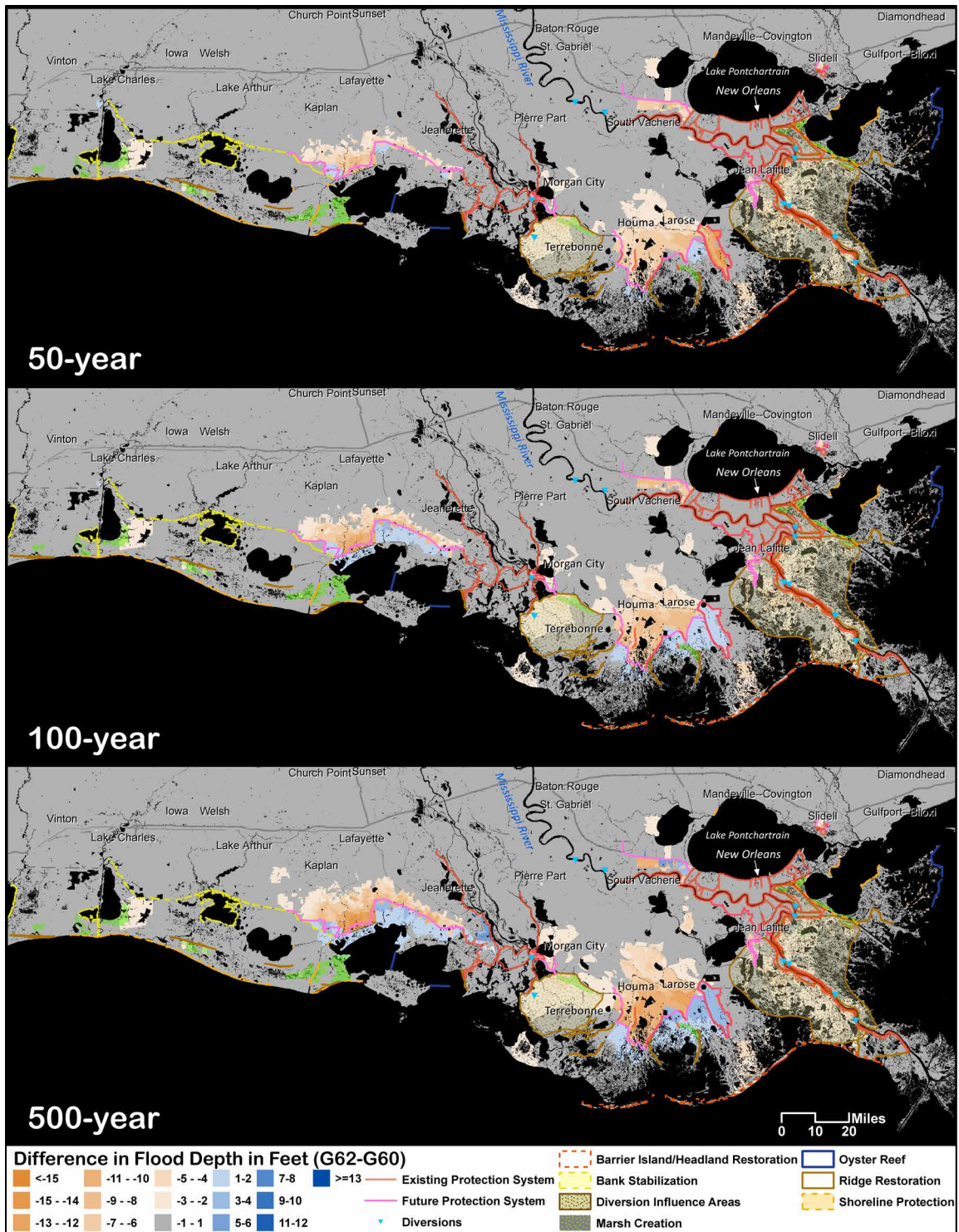


**Figure A.15: Estimated Change in Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**



**Figure A.16: Estimated Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





**Figure A.17: Estimated Change in Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**



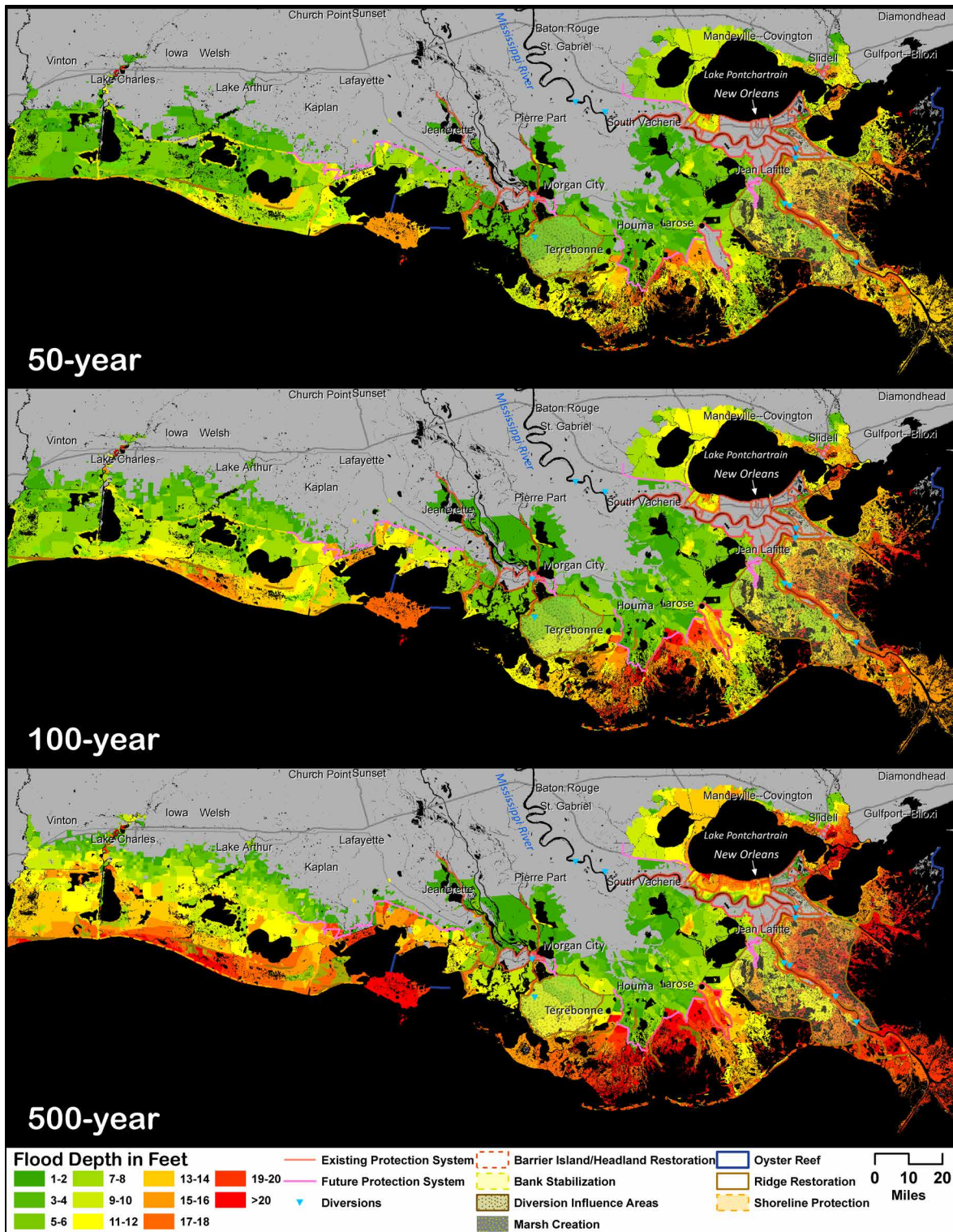
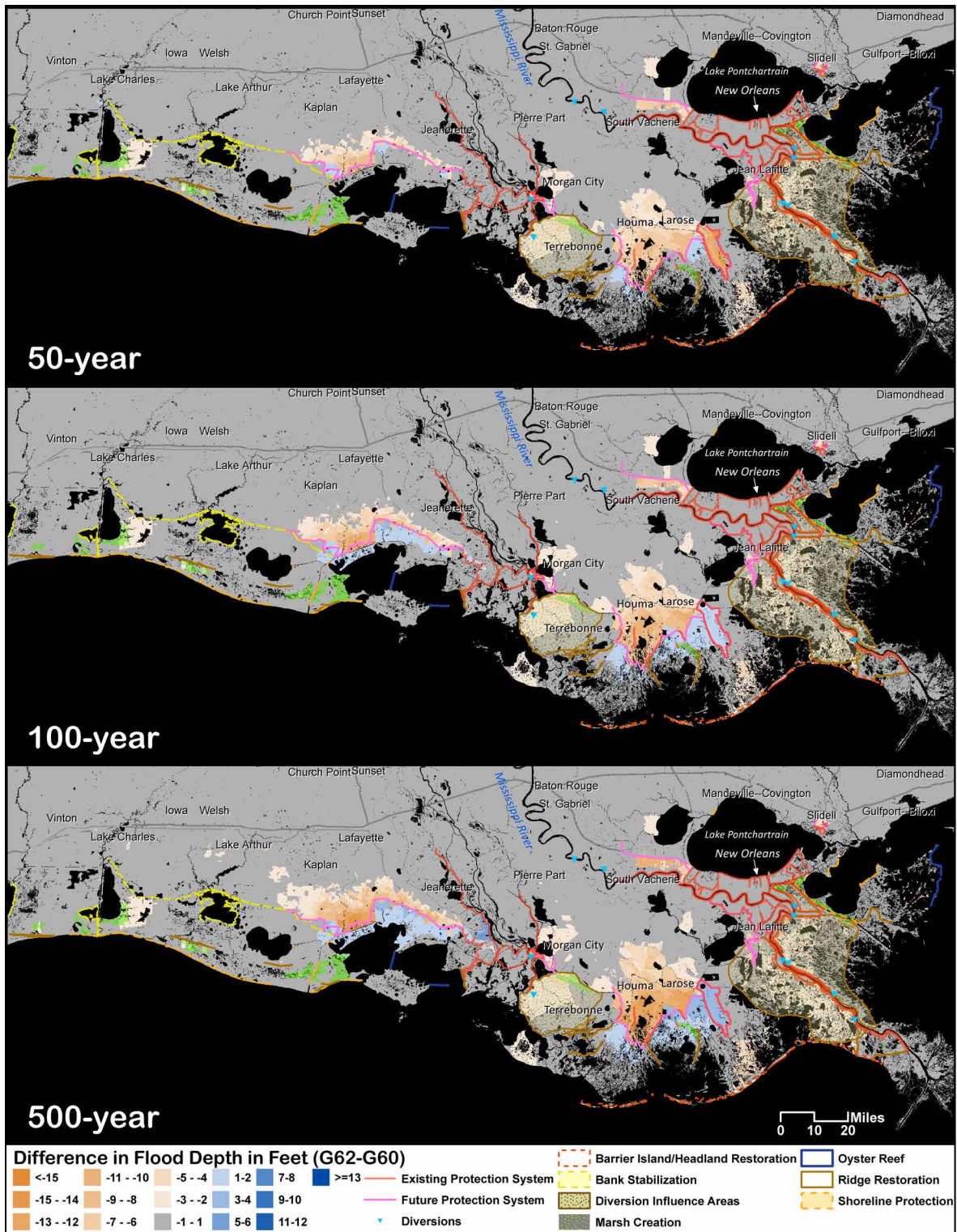


Figure A.18: Estimated Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances





**Figure A.19: Estimated Change in Flood Depth in 2036 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**



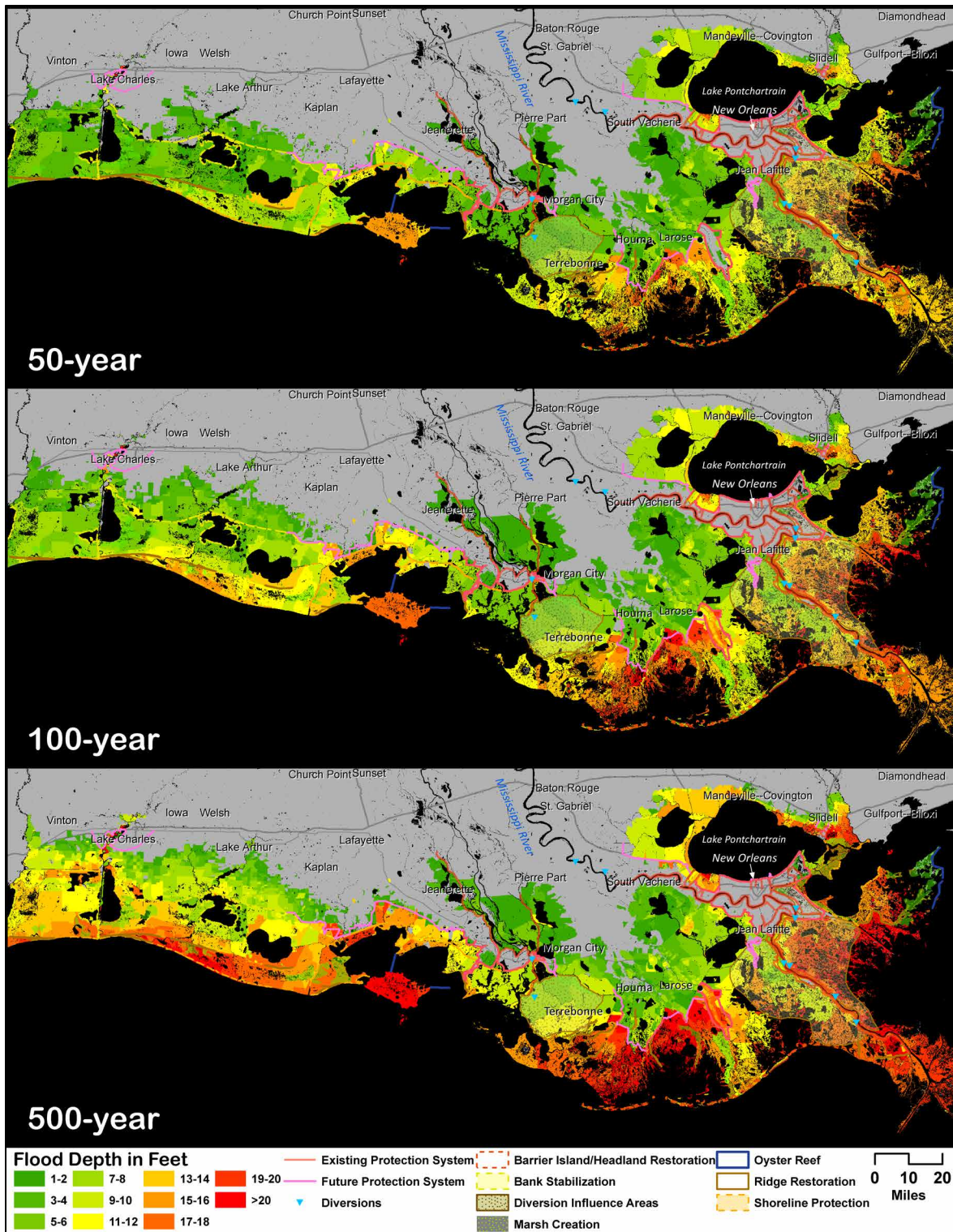
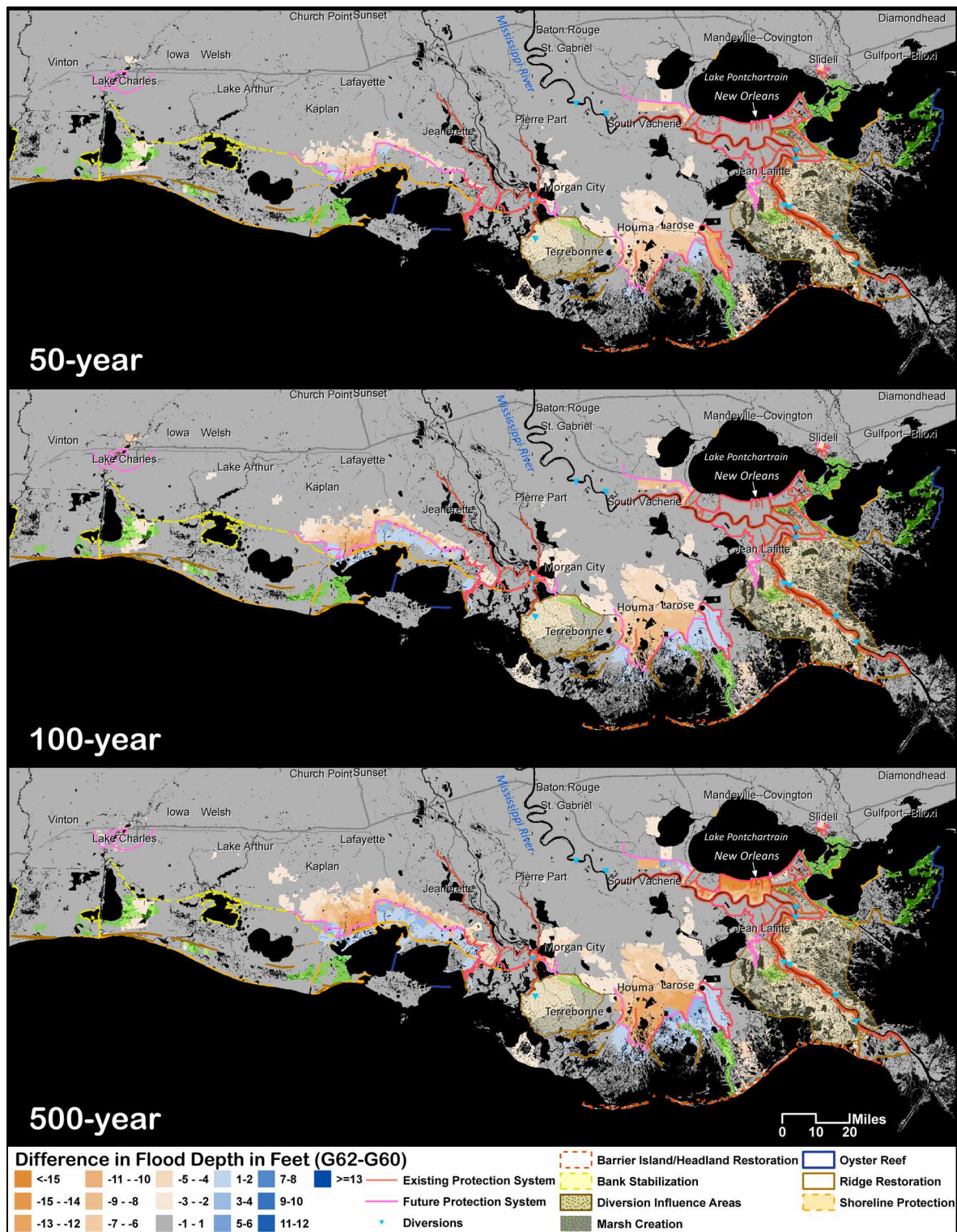


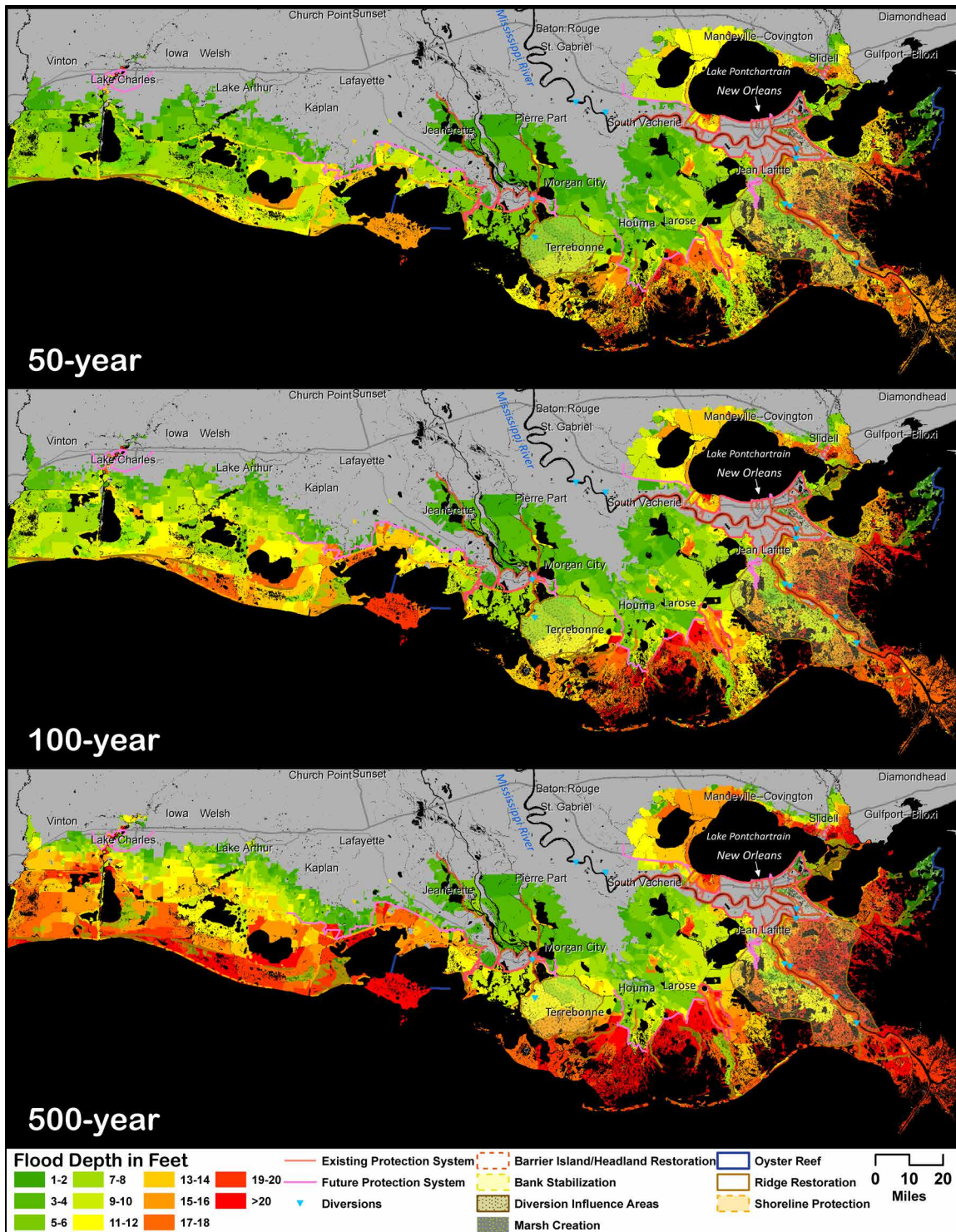
Figure A.20: Estimated Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances





**Figure A.21: Estimated Change in Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**





**Figure A.22: Estimated Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**

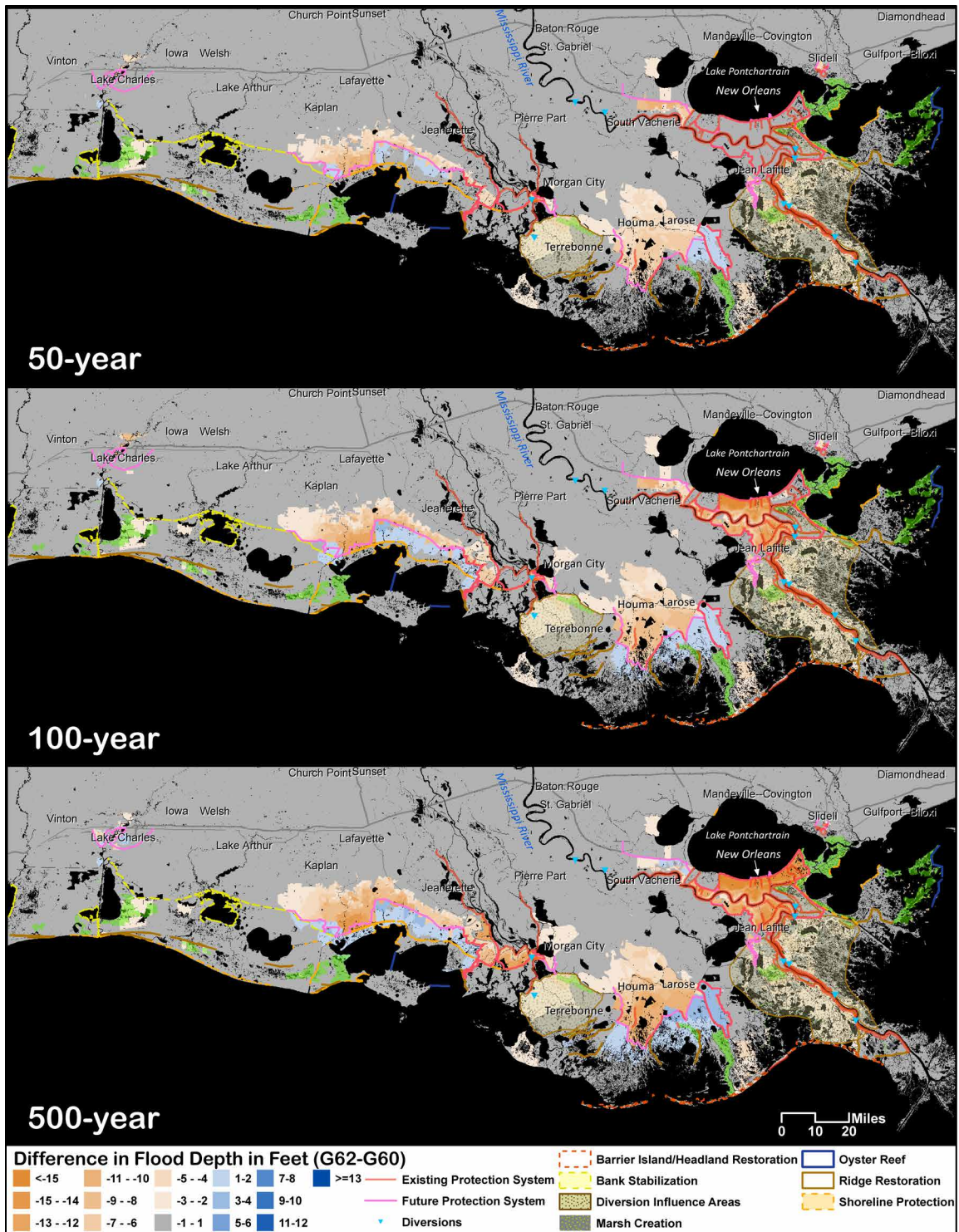


Figure A.23: Estimated Change in Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Moderate Future Scenario with High Sea Level at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances



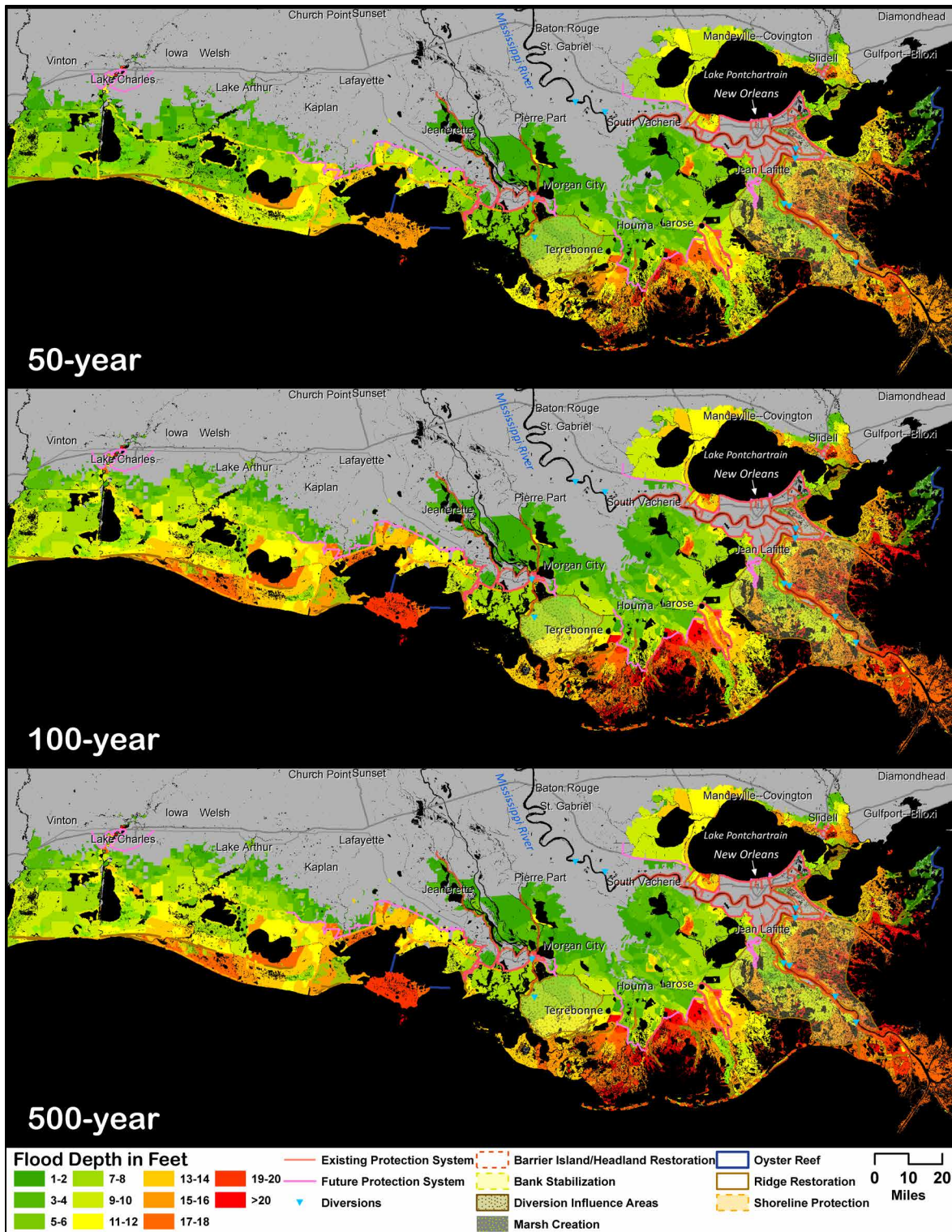
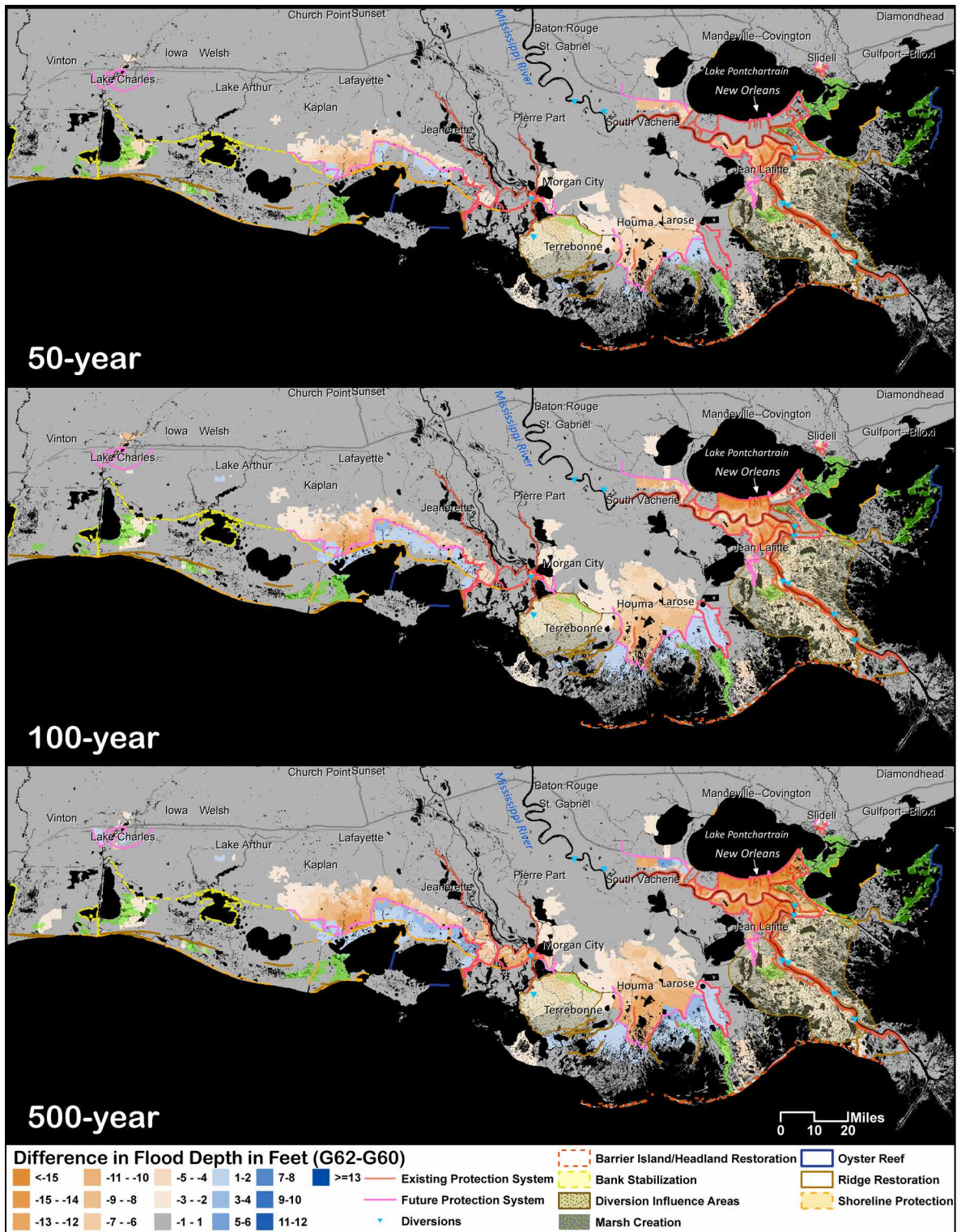


Figure A.24: Estimated Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances





**Figure A.25: Estimated Change in Flood Depth in 2061 with the Master Plan in Place, in Feet, by Census Block for Coastal Louisiana in the Less Optimistic Future Scenario at the 50-year (Top), 100-year (Middle), and 500-year (Bottom) Flood Exceedances**